

## **ABSTRACT**

[37] The invention relates to the structure of sample support plates for the mass spectrometric analyses of samples with ionization by matrix-assisted laser desorption and ionization (MALDI). The invention consists in combining a very even substructure made from a mechanically stable material with a flush mounted cover made of plastic material of constant thickness to produce a composite sample support plate with a very even surface. The plastic cover is inexpensive to make, must only be used once and helps prevent the substance-memory problem. The surface and material of the plastic cover can be optimized for MALDI. The preferred embodiment of the composite plate has the overall dimensions of a microtitre plate.